

IN THE CLAIMS:

Please cancel Claims 1-49 without prejudice.

Please add the following new Claims 50-72:

- 1 50. (New) The broadcasting apparatus comprising:
 - 2 content storing means for storing a plurality of contents, each content including a
 - 3 set of presentation information and a set of control information corresponding to the set of
 - 4 presentation information, the set of control information having a set of link information
 - 5 indicating the set of control information included in another linked content among the plurality
 - 6 of contents, wherein the set of link information included in the content indicates the set of
 - 7 presentation information and the set of control information included in another linked content
 - 8 among the plurality of contents;
 - 9 multiplexing means for multiplexing the plurality of contents stored in the content
 - 10 storing means to generate a multiplexed stream, bringing the set of control information into
 - 11 correspondence with the set of presentation information included in the same content, and
 - 12 broadcasting means for embodying the multiplexed stream generated by the
 - 13 multiplexing means in a broadcasting wave and broadcasting the broadcasting wave.
- 1 51. (New) The broadcasting apparatus of Claim 50, wherein the set of control
- 2 information has a setting of a valid period which expresses a period during which the set of
- 3 control information is valid within an output period of the set of presentation information
- 4 corresponding to the set of control information, and
- 5 wherein the multiplexing means multiplexes the set of presentation information
- 6 and multiplexes the set of control information corresponding to the set of presentation

7 information during the valid period of the set of control information to generate the multiplexed
8 stream.

1 52. (New) The broadcasting apparatus of Claim 50, wherein the content has a
2 plurality of sets of control information, each set of control information included in the content
3 being appended a version number in accordance with the valid period of each set of control
4 information.

1 53. (New) The broadcasting apparatus of Claim 50, wherein the multiplexing means
2 multiplexes the set of control information, starting from a predetermined time before the set of
3 control information becomes valid, the predetermined time being sufficiently long to enable a
4 reception apparatus to process the set of control information.

1 54. (New) The broadcasting apparatus of Claim 50, wherein the multiplexing means
2 further includes bandwidth assigning table storing means for storing a bandwidth assigning table
3 that shows a bandwidth for the digital data stream of the set of control information being part of
4 a total bandwidth of the multiplexed stream, and start means for determining the multiplexing
5 start positions of the set of control information in accordance with the bandwidths referred to the
6 bandwidth assigning table, wherein the multiplexing means multiplexes the digital data streams.

1 55. (New) A broadcast apparatus comprising:
2 content storing means for storing a plurality of contents, each content including a
3 set of presentation information and a set of control information corresponding to the set of
4 presentation information, the set of control information having a set of link information
5 indicating the set of control information included in another linked content among the plurality

6 of contents, wherein the set of control information includes a set of additional information
7 representing one of text and a graphic image that is to be outputted by way of being
8 superimposed onto the corresponding set of presentation information;

9 multiplexing means for multiplexing the plurality of contents stored in the content
10 storing means to generate a multiplexed stream, bringing the set of control information into
11 correspondence with the set of presentation information included in the same content, and
12 broadcasting means for embodying the multiplexed stream generated by the
13 multiplexing means in a broadcasting wave and broadcasting the broadcasting wave.

1 56. (New) A broadcast apparatus comprising:

2 content storing means for storing a plurality of contents, each content including a
3 set of presentation information and a set of control information corresponding to the set of
4 presentation information, the set of control information having a set of link information
5 indicating the set of control information included in another linked content among the plurality
6 of contents, wherein the set of control information includes a set of supplementary images
7 representing menu items for the linked content indicated by the set of link information included
8 in the set of control information;

9 multiplexing means for multiplexing the plurality of contents stored in the content
10 storing means to generate a multiplexed stream, bringing the set of control information into
11 correspondence with the set of presentation information included in the same content; and
12 broadcasting means for embodying the multiplexed stream generated by the
13 multiplexing means in a broadcasting wave and broadcasting the broadcasting wave.

1 57. (New) The broadcasting apparatus of Claim 56, wherein the set of control
2 information includes:

3 a plurality of sets of additional information representing one of text and a graphic
4 image that is to be outputted by way of being superimposed onto the corresponding set of
5 presentation information; and

6 a set of script information that validates one of the sets of additional information
7 in a reception apparatus, in accordance with a user operation.

1 58. (New) The broadcasting apparatus of Claim 56, wherein the set of control
2 information includes:

3 at least two groups made up of the set of link information and supplementary
4 images;

5 a set of initial information showing which group of the set of link information and
6 supplementary images is valid at a start of an output from a reception apparatus, the output being
7 an output of the set of presentation information corresponding to the set of control information;
8 and

9 a set of script information that changes a valid group made up of the set of link
10 information and supplementary images in the reception apparatus in accordance with a user
11 operation.

1 59. (New) The broadcasting apparatus of Claim 58, wherein the set of control
2 information further includes a set of additional information representing one of text and a graphic
3 image that is to be outputted by way of being superimposed onto the corresponding set of
4 presentation information.

1 60. (New) The broadcasting apparatus of Claim 58, wherein the set of presentation
2 information has either a set of image data, a set of sound data, or a combination of the set of
3 image data and the set of sound data.

1 61. (New) The broadcasting apparatus of Claim 60, wherein the set of image data is a
2 set of video data or a set of still image data.

1 62. (New) A reception apparatus comprising:
2 receiving means for receiving a broadcasting wave including a multiplexed stream
3 into which a plurality of contents have been multiplexed, each content including a set of
4 presentation information and a set of control information corresponding to the set of presentation
5 information, the set of control information having a set of link information indicating the set of
6 control information included in another linked content among the plurality of contents,
7 extracting means for extracting the set of presentation information and the set of
8 control information corresponding to the set of presentation information included in a given
9 content from the broadcasting wave received by the receiving means;
10 storing means for storing the set of control information extracted by the extracting
11 means;
12 outputting means for outputting the set of presentation information extracted by
13 the extracting means; and
14 signal receiving means for receiving a content switching signal;
15 wherein the extracting means, in accordance with the content switching signal,
16 extracts the set of control information indicated by the link information included in the set of
17 control information stored in the storing means from the broadcasting wave as a new set of

18 control information, and extracts the set of presentation information corresponding to the new set
19 of control information from the broadcasting wave as a new set of presentation information,
20 wherein the storing means stores the new set of control information extracted by
21 the extracting means, and
22 wherein the outputting means outputs the new set of presentation information
23 extracted by the extracting means.
24 wherein the set of link information included in the content indicates the set of
25 presentation information and the set of control information included in another content among
26 the plurality of contents,
27 wherein the extracting means, in accordance with the content switching signal,
28 extracts the set of presentation information indicated by the link information included in the set
29 of control information stored in the storing means from the broadcasting wave as a new set of
30 presentation information, and
31 wherein the outputting means outputs the new set of presentation information.

1 63. (New) The reception apparatus of Claim 62 wherein the set of control
2 information has a setting of a valid period which expresses a period during which the set of
3 control information is valid within an output period of the set of presentation information
4 corresponding to the set of control information, the set of presentation information being
5 multiplexed into the multiplexed stream and the set of control information corresponding to the
6 set of presentation information being repeatedly multiplexed into the multiplexed stream during
7 the valid period of the set of control information.

1 64. (New) The reception apparatus of Claim 62, wherein first identification
2 information is appended to the set of presentation information, and second identification
3 information is appended to the set of control information,
4 wherein the set of link information includes first identification information of the
5 set of presentation information and second identification information of the set of control
6 information included in another linked content,
7 wherein the extracting means includes:
8 first judging means for judging the first identification information appended to the
9 set of presentation information in the broadcasting wave;
10 second judging means for judging the second identification information appended
11 to the set of control information in the broadcasting wave;
12 obtaining means for obtaining a set of the presentation information, if the first
13 judging means judges that the first identification information appended to the set coincides with
14 specified identification information, and obtaining a set of the control information if the second
15 judging means judges that the second identification information appended to the set coincides
16 with specified identification information;
17 wherein the outputting means outputs the set of presentation information obtained
18 by the obtaining means, and
19 wherein the storing means stores the set of control information obtained by the
20 obtaining means.

1 65. (New) The reception apparatus of Claim 64, wherein a set of entry information
2 giving the first identification information and the second identification information for the
3 content to be reproduced first is multiplexed into the multiplexed stream,

4 wherein the signal receiving means receives a selection signal of the multiplexed
5 stream,

6 wherein the extracting means further includes:

7 entry information extracting means for extracting the set of entry information
8 from the multiplexed stream in accordance with the selection signal of the multiplexed stream
9 from the signal receiving means; and

10 entry information storing means for storing the set of entry information extracted
11 by the entry information extracting means,

12 wherein the obtaining means obtains the set of presentation information and the
13 set of control information to which the first and the second identification information indicated
14 by the entry information stored in the entry information storing means is appended.

1 66. (New) The reception apparatus of Claim 62, further including
2 control means for controlling the extracting means,

3 wherein first identification information and second identification information are
4 appended to the set of presentation information and the set of control information, the first and
5 second identification information being IDs (identifiers) of digital data streams to represent the
6 set of presentation information and the set of control information in the multiplexed stream,

7 wherein the link information has an identifier of a set of presentation information
8 and an identifier of a set of control information included in another linked content,

9 wherein a correspondence table is repeatedly multiplexed into the multiplexed
10 stream, the correspondence table showing correspondence between the identifier for the set of
11 presentation information and the first identification information, and correspondence between the
12 identifier for the set of control information and the second identification information,
13 wherein the extracting means extracts the correspondence table,
14 wherein the control means, by referring to the correspondence table extracted by
15 the extracting means, converts the identifier of the set of presentation information into the first
16 identification information, and the identifier of the set of control information into the second
17 identification information, and controls the extracting means so that, if the first identification
18 information and the second identification coincide with specified identification information, then
19 the extracting means extracts such a set of presentation information and such a set of the control
20 information to which the specified identification information is appended.

1 67. (New) The reception apparatus of Claim 66, wherein the first identification
2 information includes a packet identifier in accordance with MPEG2 (Moving Pictures Experts
3 Group 2) standard.

1 68. (New) The reception apparatus of Claim 66, wherein the first identification
2 information is a combination of the packet identifier in accordance with MPEG2 (Moving
3 Pictures Experts Group 2) standard and another parameter.

1 69. (New) A reception apparatus comprising:
2 receiving means for receiving a broadcasting wave including a multiplexed stream
3 into which a plurality of contents have been multiplexed, each content including a set of
4 presentation information and a set of control information corresponding to the set of presentation

5 information, the set of control information having a set of link information indicating the set of
6 control information included in another linked content among the plurality of contents,
7 extracting means for extracting the set of presentation information and the set of
8 control information corresponding to the set of presentation information included in a given
9 content from the broadcasting wave received by the receiving means;
10 storing means for storing the set of control information extracted by the extracting
11 means;
12 outputting means for outputting the set of presentation information extracted by
13 the extracting means; and
14 signal receiving means for receiving a content switching signal;
15 wherein the extracting means, in accordance with the content switching signal,
16 extracts the set of control information indicated by the link information included in the set of
17 control information stored in the storing means from the broadcasting wave as a new set of
18 control information, and extracts the set of presentation information corresponding to the new set
19 of control information from the broadcasting wave as a new set of presentation information,
20 wherein the storing means stores the new set of control information extracted by
21 the extracting means,
22 wherein the outputting means outputs the new set of presentation information
23 extracted by the extracting means,
24 wherein the set of presentation information has either a set of image data, a set of
25 sound data, or a combination of the set of image data and the set of sound data.

1 70. (New) The reception apparatus of Claim 69, wherein the set of image data is a set
2 of video data or a set of still image data.

1 71. (New) A broadcasting system which includes a broadcasting apparatus and a
2 reception apparatus wherein the broadcasting apparatus comprises:

3 content storing means for storing a plurality of contents, each content including a
4 set of presentation information and a set of control information corresponding to the set of
5 presentation information, the set of control information having a set of link information
6 indicating the set of control information included in another linked content among the plurality
7 of contents;

8 multiplexing means for multiplexing the plurality of contents stored in the content
9 storing means to generate a multiplexed stream, bringing the set of control information into
10 correspondence with the set of presentation information included in the same content; and

11 broadcasting means for embodying the multiplexed stream generated by the
12 multiplexing means in a broadcasting wave and broadcasting the broadcasting wave;

13 wherein the reception apparatus comprising:

14 receiving means for receiving the broadcasting wave;

15 extracting means for extracting the set of presentation information and the set of
16 control information corresponding to the set of presentation information included in a given
17 content from the broadcasting wave received by the receiving means;

18 storing means for storing the set of control information extracted by the extracting
19 means;

20 outputting means for outputting the set of presentation information extracted by
21 the extracting means; and
22 signal receiving means for receiving a content switching signal,
23 wherein the extracting means, in accordance with the content switching signal,
24 extracts the set of control information indicated by the link information included in the set of
25 control information stored in the storing means from the broadcasting wave as a new set of
26 presentation information, and extracts the set of presentation information corresponding to the
27 new set of control information from the broadcasting wave as a new set of presentation
28 information,
29 wherein the storing means stores the new set of control information extracted by
30 the extracting means, and
31 wherein the outputting means outputs the new set of presentation information
32 extracted by the extracting means.

1 72. (New) A recording medium used by a reception apparatus, wherein the reception
2 apparatus receives a broadcasting wave including a multiplexed stream into which a plurality of
3 contents have been multiplexed, each content including a set of presentation information and a
4 set of control information corresponding to the set of presentation information, the set of control
5 information having a set of link information indicating the set of control information included in
6 another linked content among the plurality of contents,
7 wherein the recording medium stores a program executed by a computer in the
8 reception apparatus, the program comprising:

9 a first extracting step for controlling an extracting unit included in the reception
10 apparatus to extract the set of presentation information and the set of control information
11 corresponding to the set of presentation information in a given content from the broadcasting
12 wave;

13 a first storing step for storing the set of control information extracted in the first
14 extracting step in a memory included in the reception apparatus;

15 a first outputting step for controlling an outputting unit included in the reception
16 apparatus to output the set of presentation information extracted in the first extracting step;

17 a judging step for judging whether a content switching signal has been received;

18 a second extracting step for controlling the extracting unit to extract the set of
19 control information indicated by the link information included in the set of control information
20 stored in the memory from the broadcasting wave as a new set of presentation information and
21 extracts the set of presentation information corresponding to the new set of control information
22 from the broadcasting wave as a new set of presentation information when the judging step
23 judges that the content switching signal has been received;

24 a second storing step for storing the new set of control information extracted in
25 the second extracting step in the memory included in the reception apparatus; and

26 a second outputting step for controlling the outputting unit included in the
27 reception apparatus to output the new set of presentation information extracted in the second
28 extracting step.